Claims:

1. A pilot operated check valve, comprising:

a valve body;

a valve seat; and

a pilot actuator arranged to displace the valve body from a closed position, wherein an area of the valve seat and an area of a portion of the pilot actuator acted on in an axial direction by fluid flowing through the valve seat are substantially the same.

2. The pilot operated check valve of claim 1, wherein the pilot actuator comprises a pilot piston rod displaceably and sealingly disposed in a housing of the valve to act on the valve body.

3. The pilot operated check valve of claim 1, wherein a gasket sealingly disposes a pilot piston rod of the pilot actuator in a housing of the valve, the pilot piston rod for acting on the valve body.

4. The pilot operated check valve of claim 1, wherein the valve is a microvalve.

5. The pilot operated check valve of claim 1, further comprising a valve spring that biases the valve body against the valve seat.

6. The pilot operated check valve of claim 1, further comprising a pilot spring that biases the pilot actuator away from the valve body.

7. The pilot operated check valve of claim 1, further comprising:

a valve spring that biases the valve body against the valve seat; and

a pilot spring that biases the pilot actuator away from the valve body.

8. The pilot operated check valve of claim 1, further comprising a valve block surrounding the check valve.

9. The valve of claim 1, wherein the valve body is a ball.

10. A valve, comprising:

a housing having an inlet port, an outlet port, and a pilot port therein;

a valve seat disposed between the inlet port and the outlet port;

a valve body that selectively displaces from the valve seat; and

a pilot actuator having a rod coupled to a piston, wherein the rod selectively displaces the valve body, and wherein the piston has a larger sectional area than the rod, the piston having a surface for receiving a fluid pressure supplied via the pilot port.

11. The valve of claim 10, wherein a gasket sealingly disposes the rod of the pilot actuator in the housing of the valve.

12. The valve of claim 10, wherein an area of the valve seat and an area of the rod acted on by fluid flowing through the valve seat are substantially the same.

13. The valve of claim 10, wherein the housing further comprises a pilot drain that drains a portion of a pilot bore located between the piston of the pilot actuator and a gasket surrounding the rod of the pilot actuator.

14. The valve of claim 10, further comprising a valve spring that biases the valve body against the valve seat.

15. The valve of claim 10, further comprising a pilot spring that biases the pilot actuator away from the valve body.

16. The valve of claim 10, further comprising:

a valve spring that biases the valve body against the valve seat; and

a pilot spring that biases the pilot actuator away from the valve body.

17. The valve of claim 10, wherein the valve body is a ball.

18. An assembly for operating an actuator with a microvalve, comprising:

a pump in fluid communication with an inlet of the microvalve;

a pilot actuator disposed within the microvalve, the pilot actuator having a first portion for acting on a valve body of the microvalve to move the valve body;

a pressure relief valve disposed in a fluid pathway between the pump and a second portion of the pilot actuator, the pressure relief valve opens at a predetermined pressure thereby operating the pilot actuator; and

an outlet of the microvalve in fluid communication with the actuator for operating the actuator.

19. The assembly of claim 18, wherein the first portion of the pilot actuator has a smaller sectional area than the second portion of the pilot actuator.

20. The assembly of claim 19, wherein a gasket disposed around the rod isolates fluid pressure between the first portion and the second portion of the pilot actuator.